

U.S. PATENT APPLICATION OF PHIL TRIGIANI

CLAIMS

WHAT IS CLAIMED IS:

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1. A lamp for detecting fluorescent dyes light that have been added to an air conditioning or refrigeration system, wherein the fluorescent dyes reemit light at a wavelength greater than the wavelength of light emitted from the lamp, the lamp comprising:

- a) a lamp housing;
- b) at least one light-emitting diode within the lamp housing; and
- c) means for providing power to the lamp, wherein the light emitted from the lamp is restricted to a predetermined range effective to enhance the reemission of light from the fluorescent dyes.

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2. The lamp of claim 1, wherein the diode is a blue light-emitting diode.

3. The lamp of claim 1, wherein the diode is a UV light-emitting diode.

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4. The lamp of claim 2, wherein the blue light-emitting diode is an indium gallium nitride semiconductor.

5. The lamp of claim 2, wherein the blue light-emitting diode is a laser diode.

6. The lamp of claim 5, wherein the laser diode is a gallium nitride based laser diode.

7. The lamp of claim 1, further comprising a protector ring connected to the lamp housing.

8. The lamp of claim 7, further comprising a lens positioned within the protector ring.

9. The lamp of claim 8, wherein the lens is a filter selected from the group consisting of black, red, amber, yellow, green, blue, indigo, violet, UV light and full spectrum filters.

10. The lamp of claim 9, further comprising a blocker glass.

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11. The lamp of claim 9, wherein the lens is a dichroic filter.

12. The lamp of claim 1, further comprising a plurality of light-emitting diodes.

13. The lamp of claim 12, wherein each of the light-emitting diodes emits the same color light.

14. A method for detecting leaks in an air-conditioning or refrigeration system, comprising the steps of:

a) inserting a fluorescent dye into an air-conditioning or refrigeration system;

b) running the air-conditioning or refrigeration system; and

c) inspecting the air-conditioning or refrigeration system with the lamp of claim 1.